



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/938,870	08/23/2001	Tony F. Rodriguez	P0392	1150

23735 7590 07/27/2005

DIGIMARC CORPORATION  
9405 SW GEMINI DRIVE  
BEAVERTON, OR 97008

EXAMINER

BROWN, CHRISTOPHER J

ART UNIT PAPER NUMBER

2134

DATE MAILED: 07/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/938,870

Applicant(s)

RODRIGUEZ ET AL.

Examiner

Christopher J. Brown

Art Unit

2134

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5/18/2005.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

RD

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments, filed 5/18/2005, with respect to the rejection(s) of claim(s) 1, and 17 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made.

As per claim 6, it is inherent that the strength of the watermark is being measured, further defined in the non-final rejection below.

As per claim 12, with regards to detecting a watermark from a printer object, Wang 6,263,086 teaches retrieving a watermark from a document. Cookson provides comparing digital watermarks.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1, 4, 5, 6, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang US 6,263,086 in view of Adler US 6,275,599 in view of Wang US 6,252,971.**

Art Unit: 2134

As per claims 1, 4, 5, 6, and 8, Wang US 6,263,086 (Wang 086) teaches embedding an invisible watermark in a halftone screen structure. (Col 1 lines 49-53, Col 2 lines 1-5).

Wang does not teach errors when the screen is reproduced.

Adler teaches use of measuring the Strength of a fragile watermark for which any tampering of the image is detected through errors produced in the watermark (Col 2 lines 30-35).

It would have been obvious to one of ordinary skill in the art to include a fragile watermark with the image of Adler in order to copy protect the document.

As per claim 6, and 8 Adler teaches using the errors of the fragile watermark to detect reproduction, (Col 2 lines 30-35). Adler teaches printing digital files, see Figs 8-11.

Wang US 6,252,971 (Wang 971) teaches that reproduction of halftone structures produces distortion and non-uniformity, (Col 1 line 57- Col 2 line 10).

It would have been obvious to one of ordinary skill in the art to use this distortion with the previous Wang-Adler combination to allow viewing of an original work vs a copied work.

**Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wang US 6,263,086 in view of Adler US 6,275,599 in view of Wang US 6,252,971 in view of Cox US 5,930,369.**

As per claim 2, the previous Wang-Adler-Wang combination does not disclose including spread spectrum modulation.

Cox teaches using spread spectrum modulation, (Col 6 lines 12-26).

It would have been obvious to one of ordinary skill in the art to use the spread spectrum modulation of Cox with the watermark system of the Wang-Adler combination because spreading the watermark throughout the spectrum ensures a large measure of security against attacks, (Col 6 lines 39-45)

**Claims 3, 7, 10, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang US 6,263,086 in view of Adler US 6,275,599 in view of Wang US 6,252,971 in view of Brundage US 2002/016992**

As per claim 7, the previous Wang-Adler-Wang combination does not disclose watermark alignment.

Brundage teaches using watermark data to align an optical scanner, [0007].

It would have been obvious to one of ordinary skill in the art to use the orientation data of Brundage with the watermark system of Wang086 because it allows the scanner to align itself without user interference.

As per claims 3, 10, and 11, the previous Wang-Adler-Wang combination does not disclose a payload.

Brundage teaches that a watermark may carry a payload with any type of data.

**Claims 9, 12, 14, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang US 6,263,086 in view of Adler US 6,275,599 in view of Wang US 6,252,971 in view of Cookson US 6,591,365.**

As per claims 9, 12, 16, and 17 the previous Wang-Adler-Wang combination does not teach a first and second watermark.

Cookson teaches using both a robust watermark, and a fragile watermark, and compare them to determine if the media has been copied or tampered with, (Claim 19).

It would have been obvious to one of ordinary skill in the art to use the robust and fragile watermark of Cookson, with the system of Wang-Adler so that a payload could be maintained, and media copying or tampering could be detected.

As per claim 14 Wang-Adler teach that the digital watermark is invisible, (Wang Col 1 lines 49-53).

**Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wang US 6,263,086 in view of Adler US 6,275,599 in view of Cookson US 6,591,365 in view of Crane US 4,552,617**

As per claim 13, The previous combination of Wang-Adler-Wang-Cookson does not teach varying the topology of a document.

Crane teaches a watermark producing method that varies the topology of a watermark, (Col 3 line 67- Col 4 line 8).

It would have been obvious to one of ordinary skill in the art to modify the Wang-Adler-Cookson combination with Crane's varying topology because the process increases the security of the watermark.

Art Unit: 2134

**Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wang US 6,263,086 in view of Adler US 6,275,599 in view of Wang US 6,252,971 in view of Cookson US 6,591,365 in view of Brundage US 2002/016992**

As per claim 15, The previous combination of Wang-Adler-Wang-Cookson does not teach alignment.

Brundage teaches using watermark data to align an optical scanner, [0007].

It would have been obvious to one of ordinary skill in the art to use the orientation data of Brundage with the watermark system of Wang-Adler-Wang-Cookson because it allows the scanner to align itself without user interference.

**Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wang US 6,263,086 in view of Adler US 6,275,599 in view of Wang US 6,252,971 in view of Rhodes US 6,539,095.**

As per claim 17, Wang-Adler-Wang teaches printed watermarks but fails to teach a fiducial. Rhodes teaches use of fiducial marks in image processing, (Col 57 line 57 – Col 58 line 2).

It would have been obvious to one of ordinary skill in the art to combine the watermarks of Wang-Adler-Wang with the fiducial marks of Rhodes to facilitate the use of machines to view and scan documents.

*Conclusion*

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher J. Brown whose telephone number is (571)272-3833. The examiner can normally be reached on 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Morse can be reached on (571)272-3838. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Christopher Brown

7/22/05



David Y. Jung  
Primary Examiner

